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Department of Energy

ROCKY FLATS FIELD OFFICE
10808 HIGHWAY 93, UNIT A
GOLDEN COLORADO 80403-8200

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CORRESPONDENCE
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DIST	LTR	ENC
BOGNAR, E.	X	
CROCKETT, G.		
DECK, C. A.	X	
DEGENHART, K.		
DIETER, T. J.		
DIETERLE, S. E.		
FERRERA, D. W.		
FERRI, M. S.		
GERMAIN, A. L.		
GIACOMINI, J. J.		
ISOM, J. H.		
LINDSAY, D. C.	X	
LONG, J. W.		
MARTINEZ, L. A.	X	
NAGEL, R. E.	X	
NORTH, K.	X	
PARKER, A. M.	X	
POWERS, K.		
RODGERS, A. D.		
SHELTON, D. C.	X	
SPEARS, M. S.		
TRICE, K. D.		
TUOR, N. R.		
WILLIAMS, J. L.		
Brooks, L.	X	
Nininger, R.	X	
CABLE, J.	X	

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Gentlemen

NOTIFICATION OF REPORTABLE SURFACE - WATER MONITORING RESULTS AT ROCKY FLATS CLEANUP AGREEMENT POINT OF EVALUATION GS10

Pursuant to the *Rocky Flats Cleanup Agreement (RFCA), Attachment 5, Rocky Flats Environmental Technology Site (Site) Action Levels and Standards Framework for Surface Water, Groundwater, and Soils (ALF), Section 2 4 B*, the Department of Energy (DOE), Rocky Flats Field Office (RFFO) is notifying you of water-quality monitoring results at the RFCA Point of Evaluation (POE) surface-water monitoring station location GS10, which is located in South Walnut Creek upstream of Pond B-1.

The calculated 30-day moving average for americium (Am) triggered the reporting requirements under RFCA Attachment 5, Section 2 4 B for the period August 25, 2002, through August 28, 2002, inclusive (for details, see Table 1). The calculated 30-day moving average for plutonium (Pu) is also reportable for the period beginning on September 5, 2002, and ending on September 9, 2002. Validated analytical results for all samples that were used in the calculations, through September 9, are listed in Table 2.

Please note that the calculated 30-day average for americium diminished to 0.15 pCi/L on August 29, 2002 and has remained below the reporting threshold through September 9, 2002. These newest reportable values at GS10 are consistent with seasonal water-quality

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ADMIN RECORD

SW-A-004692

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observations made every spring/summer since 1997 at this location, following implementation of RFCA flow-paced monitoring

Table 1 - Reportable 30-Day Average Values for RFCA POE Monitoring Location GS10

Analyte	Dates of Reportable Value	Range of Reportable 30-day Avg. Values (pCi/L)
Americium	8/25/02 - 8/28/02	0.16 - 0.16
Plutonium	9/5/02 - 9/9/02	0.16 - 0.19

Table 2 - Validated Analytical Results for Composite Samples Collected at GS10 Used in the 30-Day Average Calculations

Composite Sample Start Date	Americium Analytical Result (pCi/L)	Plutonium Analytical Results (pCi/L)
7/17/02	0.046	0.011
7/29/02	0.196	0.030
8/6/02	0.085	0.145
9/3/02	0.203	0.232

RFCA Reporting Protocol

To meet the Site's RFCA commitment, DOE must transmit this information to the Environmental Protection Agency (EPA) and the Colorado Department of Public Health and Environment (CDPHE) within the 15-day reporting period, which ends November 14, 2002. In addition, RFCA also requires that the DOE, within 30 days of gaining knowledge of the reportable results, submit to EPA and CDPHE a source evaluation plan and schedule addressing this reportable value. This plan must be transmitted by November 29, 2002. This letter serves as notification and DOE proposes that it addresses the requirement for a source evaluation plan and schedule.

Downstream Water Quality Monitoring

Water flowing through GS10 also passes through the lower B-series ponds (Ponds B-4 and B-5) and South Walnut Creek before leaving the Site. RFCA Points of Compliance (POCs) GS08 (Pond B-5 outlet) and GS03 (Walnut Cr. at Indiana St.) again monitor this water. The GS10 analytical results and the reportable 30-day average values were compared with those for pre-discharge samples collected from Pond B-5 prior to the

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September 2002 direct discharge and from RFCA POC monitoring stations GS08 and GS03 for that discharge (9/5 – 9/16/02) Monitoring results from Pond B-5 (predischARGE) and POCs GS03 and GS08 were below reporting thresholds for the same period

Ongoing GS10 Source Investigation

The RFETS completed the latest special source investigation of the GS10 sub-drainage in August 2001 This investigation, the *Final Source Evaluation Report for Point of Evaluation GS10 Water Years 2000 – 2001*, was guided by the *Sampling and Analysis Plan for Automated Synoptic Surface-Water and Sediment Sampling for the GS10 Source Investigation* This report was designed to identify location-specific subdrainage areas that may contain source areas or "hot-spots" and further define or resolve the location of discrete areas enriched in americium as compared to the Am Pu activity ratios found in weapons-grade materials

The CDPHE also conducted an independent investigation of the GS10 subdrainage The CDPHE's study is guided by their quality assurance project plan *Reconnaissance Sampling Related to Source Location Investigation of Plutonium and Americium Action Level Exceedances at Point of Evaluation GS10*

The results of these source evaluations of the GS10 subdrainage have not located a distinct source area requiring an accelerated action Environmental Restoration (ER) program personnel will further evaluate the South Walnut Creek area between the 750 Pad and Pond B-1 during the second and third quarters of fiscal year (FY) 04 as part of the ER evaluation for Pond B-1

Recommendation

The findings and conclusions of prior Walnut Creek and GS10 source evaluations suggest that one or more low-level distributed actinide source areas exist within the GS10 subdrainage Additionally, Pu/Am activity ratios in the surface water during the reportable events suggest that the suspect low-level actinide source areas are relatively enriched in americium as compared to Am Pu activity ratios found in weapons-grade materials These source evaluations also concluded that ongoing RFETS activities (i.e., Decontamination and Decommissioning and ER projects, excavations, or other routine operations) did not contribute to increased contamination and reportable values

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In consideration of past source evaluation findings and conclusions, DOE proposes the following in response to these reportable values at GS10

- (1) Routine monitoring as required by RFCA and the Site Integrated Monitoring Plan will continue
- (2) Routine data evaluation for GS10 will be included in the Water Year 2002 Automated Surface-Water Monitoring Report
- (3) Evaluation of the area for a potential source(s) by ER personnel as part of the evaluation of Pond B-1 during the second and third quarters of FY 04
- (4) No additional source evaluation will be conducted for this area as a result of this event

If you have any questions on this transmittal, please contact Glenn Doyle at (303) 966-3087

Sincerely,



Joseph A Legare
Assistant Manager
for Environment and Stewardship

cc

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Administrative Record

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